MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

CertainTeed Corporation
18 Moores Road
Malvern, PA 19355

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: CertainTeed Modified Bitumen Roof Systems over Steel Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA# 13-0702.02 and consists of pages 1 through 42.
The submitted documentation was reviewed by Alex Tigera.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified
Material:	APP, SBS
Deck Type:	Steel
Maximum Design Pressure:	**-172.5 psf.**

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
All Weather/Empire Base Sheet	39 3/8" x 65'10"; Roll weight: 70 lbs. (2 squares)	ASTM D 4601, Type II UL Type G2	Asphalt coated, fiberglass reinforced base sheet.
Flexiglas Base Sheet	39 3/8" x 98'9"; Roll weight: 90 lbs. (3 squares)	ASTM D 4601, Type II UL Type G2	Modified Bitumen coated fiberglass base sheet.
Flintlastic Base 20	39 3/8" x 49'6"; Roll weight: 90 lbs. (1.5 squares)	ASTM D 6163, Grade S, Type I	Modified Bitumen coated fiberglass base sheet.
Flintglas Ply Sheet Type IV	39 3/8" x 164'7"; Roll weight: 38 lbs. (5 squares)	ASTM D 2178, Type IV UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintglas Premium Ply Sheet Type VI	39 3/8" x 164'7"; Roll weight: 40 lbs. (5 squares)	ASTM D 2178, Type VI UL Type G1	Fiberglass, asphalt impregnated ply sheet.
Flintlastic STA	39 3/8" x 32'10"; Roll weight: 87 lbs. (1 square)	ASTM D 6222, Grade S, Type I	Smooth surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GTA	39 3/8" x 32' 10"; Roll weight: 105 lbs. (1 square)	ASTM D 6222, Grade G, Type I	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GTA-FR	39 3/8" x 32' 10"; Roll weight: 105 lbs. (1 square)	ASTM D 6222, Grade G, Type I	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
Flintlastic GMS	39 3/8" x 32' 10"; Roll weight: 94 lbs. (1 square)	ASTM D 6164, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Flintlastic Premium GMS	39 3/8" x 32' 10"; Roll weight: 101 lbs. (1 square)	ASTM D 6164, Grade G, Type II	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application.
Flintlastic FR-P	39 3/8" x 32' 10"; Roll weight: 101 lbs. (1 square)	ASTM D 6164, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application.
Flintlastic Premium FR-P	39 3/8" x 32' 10"; Roll weight: 101 lbs. (1 square)	ASTM D 6164, Grade G, Type II	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application.
Flintlastic FR Dual Cap	39 3/8" x 32' 10"; Roll weight: 103 lbs. (1 square)	ASTM D 6162, Grade G, Type I	Granule surfaced SBS modified bitumen membrane with a nonwoven polyester/fiberglass composite mat reinforcement for use in cold or mop applications.
Flintlastic FR Cap 30	39 3/8" x 32' 10"; Roll weight: 86 lbs. (1 square)	ASTM D 6163, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications.
Flintlastic FR Cap 30 T	39 3/8" x 32'10"; Roll weight: 100 lbs. (1 square)	ASTM D 6163, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for torch application.
Flintlastic Base 20 T	39 3/8" x 33'; Roll Weight: 81 lbs. (1 square)	ASTM D 6163, Grade S, Type I	Modified Bitumen, coated fiberglass base sheet for torch application.
Flintlastic FR Cap 30 CoolStar	39 3/8" x 32' 10"; Roll weight: 88 lbs. (1 square)	ASTM D 6163, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for mop applications. Covered with reflective CoolStar Coating.
Flintlastic FR Cap 30 T CoolStar	39 3/8" x 32' 10"; Roll weight: 102 lbs. (1 square)	ASTM D 6163, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen membrane with fiberglass mat reinforcement for torch applications. Covered with reflective CoolStar Coating.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Flintlastic GTA CoolStar	39 3/8" x 32' 10"; Roll weight: 106 lbs. (1 square)	ASTM D 6222, Grade G, Type I	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application. Covered with reflective CoolStar Coating.
Flintlastic GTA-FR CoolStar	39 3/8" x 32' 10"; Roll weight: 106 lbs. (1 square)	ASTM D 6222, Grade G, Type I	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application. Covered with reflective CoolStar Coating.
Flintlastic GMS CoolStar	39 3/8" x 32' 10"; Roll weight: 97 lbs. (1 square)	ASTM D 6164, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flintlastic Premium GMS CoolStar	39 3/8" x 32' 10"; Roll weight: 103 lbs. (1 square)	ASTM D 6164, Grade G, Type II	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flintlastic FR-P CoolStar	39 3/8" x 32' 10"; Roll weight: 103 lbs. (1 square)	ASTM D 6164, Grade G, Type I	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flintlastic Premium FR-P CoolStar	39 3/8" x 32' 10"; Roll weight: 103 lbs. (1 square)	ASTM D 6164, Grade G, Type II	Fire resistant, granule surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop application. Covered with reflective CoolStar Coating.
Flintlastic Ultra Poly SMS Base Sheet	39 3/8" x 32' 10"; Roll weight: 90 lbs. (1 square)	ASTM D 6164, Grade S, Type I	Smooth surfaced SBS Modified Bitumen Membrane with non-woven polyester mat reinforcement for mop applications.
Glasbase Base Sheet	39 3/8" x 98'9"; Roll weight: 75 lbs. (3 squares)	ASTM D 4601, Type II UL Type G2	Asphalt coated, fiberglass base sheet.
Flintlastic Poly SMS Base Sheet	39 3/8" x 64' 3"; Roll weight: 90 lbs. (2 squares)	ASTM D 4601, Grade S, Type II UL Type G2	Modified Bitumen coated polyester base sheet.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Yosemite Venting Base Sheet	39 3/8" x 32'10"; Roll weight: 85 lbs. (1 square)	ASTM D 3909 ASTM D 4897, Type II, UL G3	Mineral Surfaced fiberglass reinforced buffer sheet.
Flintlastic APP Base T	39 3/8" x 65' 4"; Roll weight: 100 lbs. (2 squares)	ASTM D6509	Modified Bitumen coated fiberglass base sheet.
Flintlastic Ultra Glass SA	39 3/8" x 33'11"; Roll weight: 73 lbs. (1 square)	ASTM D1970	Self-adhering, fiberglass reinforced, SBS modified bitumen base/ply sheet.
Black Diamond™ Base Sheet	36" x 68'7"; Roll weight: 78 lbs. (2 squares)	ASTM D 1970	Self-adhering fiberglass reinforced modified bitumen base sheet
FlintBond Brush	5 gallon pails	ASTM D3019	Cold applied, SBS polymer modified asphalt adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
FlintBoard ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard ISO Cold	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard$_H$ ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard$_H$ ISO WF	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard$_H$ ISO NB	Polyisocyanurate foam insulation	CertainTeed Corp.
FlintBoard$_H$ ISO Cold	Polyisocyanurate foam insulation	CertainTeed Corp.
Structodek High Density Fiberboard Roof Insulation	Wood fiber insulation board	Blue Ridge Fiberboard, Inc.
Fesco Board	Expanded mineral fiber insulation	Johns Manville Corp.
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Perlite Insulation	Perlite insulation board	Generic
EPS	Type IX 1.8 pcf. Expanded Polystyrene Insulation	Generic
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia-Pacific Gypsum LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
H-Shield WF	Polyisocyanurate foam insulation	Hunter Panels, LLC
H-Shield NB	Polyisocyanurate foam insulation	Hunter Panels, LLC
H-Shield-CG	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 3	Polyisocyanurate foam insulation	Johns Manville Corp.
ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Multi-Max FA-3	Polyisocyanurate roof insulation	RMax Operating, LLC
FlintBoard ISO	Polyisocyanurate foam insulation	CertainTeed Corp.
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corp.
ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corp.
SECUROCK Gypsum-Fiber Roof Board	Gypsum insulation	United States Gypsum Corp.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast 12	Insulation fastener	various	SFS Intec, Inc.
2.	Dekfast 14	Insulation fastener	various	SFS Intec, Inc.
3.	Dekfast Galvalume Steel Hex Plate	Galvalume AZ50 steel plate	2 7/8" x 3 ¼"	SFS Intec, Inc.
4.	Dekfast Galvalume Steel 3" Round	Galvalume AZ50 stress plate	3" x .018"	SFS Intec, Inc.
5.	OMG 3" Galvalume Steel Plate	Galvalume stress plate	3" round	OMG, Inc.
6.	#12 Standard Roofgrip	Insulation fastener for wood and steel.	various	OMG, Inc.
7.	#14 Roofgrip Fasteners	Insulation fastener for wood and steel.	various	OMG, Inc.
8.	3 in. Ribbed Galvalume Plate	Galvalume stress plate.	3" round	OMG, Inc.
9.	AccuTrac Plate	Galvalume stress plate.	3" square	OMG, Inc.
10.	OMG 3 in. Round Metal Plates	Galvalume AZ50 steel plate	3" round	OMG, Inc.
11.	Flat Bottom Metal Plate	Aluminized stress plate	3" square	OMG, Inc.
12.	Trufast #14 HD Fastener	Insulation fastener for wood and steel decks	various	Altenloh, Brinck & Co. U.S., Inc.
13.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
14.	Trufast 2.4" Barbed Metal Seam Plates	Galvalume AZ50 steel plate	2.4" round	Altenloh, Brinck & Co. U.S., Inc.
15.	Trufast #12 DP Fastener	Coated, carbon steel screw	various	Altenloh, Brinck & Co. U.S., Inc.
16.	Dekfast 15 HS	Coated, carbon steel fastener	various	SFS Intec, Inc.
17.	Trufast #15 EHD Fastener	Coated, carbon steel screw	various	Altenloh, Brinck & Co. U.S., Inc.
18.	Dekfast Dekflat Round Plastic Lock Plate	Polypropylene round stress plate	3" round	SFS Intec, Inc.
19.	FlintFast #12	Coated, carbon steel screw	various	CertainTeed Corp.
20.	FlintFast #14	Insulation fastener for wood and steel decks	various	CertainTeed Corp.
21.	FlintFast 3" Insulation Plate	Galvalume AZ50 steel plate	3" round	CertainTeed Corp.
22.	OMG Heavy Duty	Insulation fastener for use in wood, steel or concrete decks	various	OMG, Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	Generic	Gravel applied at 400 lbs/sq., adhered with flood coat of asphalt at 60 lbs/sq.
2.	Generic	Slag applied at 300 lbs/sq., adhered with flood coat of asphalt at 60 lbs/sq.
3.	Karnak Corp.	Karnak (#97 AF) Fibrated Aluminum Roof Coating applied at an application rate of 1.5 gal/sq.
4.	CertainTeed Corp.	FlintCoat A-150 applied at an application rate of 1.5 gal/sq.
5.	Gardner Asphalt Corp.	APOC #212 Fibered Aluminum Roof Coating applied at an application rate of 1.5 gal/sq.
6.	Gardner Asphalt Corp.	APOC #400 Sunbrite applied at an application rate of 3 gal./sq.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	FM 4470	J.I. 3Y8A1.AM	03/23/96
	FM 4470	J.I. 0D3A3.AM	04/04/97
	FM 4470	J.I. 2D0A0.AM	12/23/98
	FM 4470	J.I. 1D7A4.AM	11/09/98
	FM 4470	3028410	02/19/07
	FM 4470	3039046	06/15/10
	FM 4470	3048520	09/19/13
	FM 4470	3031350	09/27/07
	FM 4470	3046104	08/13/13
	FM 4470	3039848	12/02/11
Underwriters Laboratories, Inc.	UL 790	R11656	10/25/12
United States Testing Company	ASTM D 5147	97457-4	06/03/88
	ASTM D 5147	97-457-2R	12/02/87
Momentum Technologies, Inc.	ASTM D4601	AX31G8D	09/05/08
	ASTM D6164	AX31G8F	06/05/09
	ASTM D6222	AX31G8G	06/05/09
	ASTM D3909/4897	AX31G8C	09/05/08
Trinity|ERD	TAS 114	3513.08.02-R1	03/17/11
	TAS 117 (B)	3503.10.06	10/10/06
	TAS 117	3515.07.03	07/22/03
	TAS 117 (B)	O6490.04.07-R1	06/27/07
	TAS 114 (H)	Letter	04/05/06
	FM 4470, TAS 114	3533.01.06	01/06/06
	FM 4470, TAS 114	3521.07.04-R1	10/26/07
	TAS 117 (B)/ ASTM D6862	C8500SC.11.07	11/30/07
	FM 4470, TAS 114	C8370.08.08	08/19/08
	ASTM D6163/6164/6222/3909	C10080.09.08-R4	03/25/10
	TAS 117 B	C35500.02.11	02/09/11
	ASTM D1876	C35460.05.11-R1	05/20/15
	ASTM D1876, TAS 114 (H), TAS 117 (B)	C42110.08.12	08/13/12
	ASTM D1876, TAS 114 (H), FM 4474	C47320.03.14	03/26/14
	ASTM D4601	C40050.09.12-1	09/28/12
	ASTM D1970	C40050.09.12-2	09/28/12
	ASTM D5147/4798	C31410.10.10-R1	11/01/12
	ASTM D5147/4798	C31410.01.11-1-R1	11/01/12
	ASTM D4798	C31410.01.11-2A-R1	02/21/13
	ASTM D4798	C31410.12.13	12/05/13
	ASTM D6222	C40050.12.13-R1	12/31/13
	TAS 114 / TAS 117	C30310.12.09	12/17/09

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
	ASTM D1876, TAS 114 (H), FM 4474	C45620.03.14	03/27/14
PRI Construction Materials Technologies LLC	ASTM D6163	CTC-032-02-01	01/22/08
	ASTM D6163	CTC-066-02-01	08/09/11
	ASTM D6222	CTC-070-02-01	08/09/11
	ASTM D6164/4798	CTC-093-02-01	08/09/11
	ASTM D2178	CTC-122-02-01	03/13/12
	ASTM D2178	CTC-123-02-01	03/13/12
	ASTM D4601	CTC-127-02-01	03/13/12
	ASTM D6509	CTC-116-02-01	04/04/12
	ASTM D6163	CTC-128-02-01	06/11/12
	ASTM D6163	CTC-129-02-01	06/11/12
	ASTM D6164	CTC-132-02-01	06/11/12
	ASTM D6164	CTC-162-02-01	05/09/13
	ASTM D6164	CTC-161-02-01	05/09/13
	ASTM D6162	CTC-183-02-01	10/02/13
	ASTM D6164	CTC-190-02-01	12/02/13
	ASTM D1970	CTC-199-02-01	01/22/14

APPROVED ASSEMBLIES:

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 40 steel deck is secured at 6 ft. spans with Tek/5 fasteners spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 18" o.c.

System Type B(1): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**19**	**1:1.45**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Millennium One Step Foamable Adhesive in 0.75 inch ribbons spaced 12 inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered.

Ply Sheet: (Optional) One or more plies of Flintlastic APP Base T or Flintlastic STA, torch adhered

Membrane: One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, torch adhered.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -45 psf (See General Limitation #7.)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type WR, Grade 33 steel fastened 6" o.c. with ICH Traxx/ 5 fasteners to minimum ¼" thick structural steel support spaced maximum 6' o.c. Deck side laps are secured with three ICH Traxx/1 fasteners spaced evently between supports.

System Type B(2): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FlintBoard ISO, ACFoam-II, ENRGY 3, ISO 95+ GL, H-Shield, FlintBoard$_H$ ISO Minimum 2.0" thick	**1, 2, 6, 7, 15, 12, 19, 20**	**1:1.45 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insta Stik Quik Set Insulation Adhesive, OMG OlyBond 500 Adhesive, Tit-Set Roofing Adhesive and 3M Polyurethane Foam Insulation Adhesive CR-20 or Millennium One Step Foamable Adhesive in 0.75 inch ribbons spaced 12 inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of Flintlastic Ultra Glass SA, self-adhered.

Membrane: One ply of Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic Premium GMS or Flintlastic Premium GMS CoolStar applied in hot asphalt full coverage at a rate of 20-25 lb/sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -52.5 psf (See General Limitation #7)

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type B(3): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO		
Minimum 1.5" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Minimum 2" thick	**1, 2, 6, 7, 12**	**1:3.2 ft²**
ENRGY 3, ENRGY 3 25 PSI		
Minimum 1.4" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Minimum 2" thick	**1, 2, 6, 7, 12**	**1:3.2 ft²**
Approved Perlite Insulation		
Minimum ¾" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Approved High Density Wood Fiberboard		
Minimum ½" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
DensDeck, DensDeck Prime		
Minimum ¼" thick	**1, 2, 6, 7, 12**	**1:2 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any of the insulations listed for Base Layer, above.		
Minimum See Base Layer	**N/A**	**N/A**

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40.
Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic STA or Flintlastic APP Base T torch adhered torch adhered.
Membrane:	Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, or Flintlastic GTA-FR CoolStar torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type B(4): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO		
Minimum 1.5" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Minimum 2" thick	**1, 2, 6, 7, 12**	**1:3.2 ft²**
ENRGY 3, ENRGY 3 25 PSI		
Minimum 1.4" thick	**1, 2, 6, 7**	**1:2 ft²**
Minimum 2" thick	**1, 2, 6, 7, 12**	**1:3.2 ft²**
Approved Perlite Insulation		
Minimum ¾" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Approved High Density Wood Fiberboard		
Minimum ½" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
DensDeck, DensDeck Prime		
Minimum ¼" thick	**1, 2, 6, 7, 12**	**1:2 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Any of the insulations listed for Base Layer, above.		
Minimum See Base Layer	**N/A**	**N/A**

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40
Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic Ultra Poly SMS Base Sheet torch applied.
Membrane:	One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar adhered to ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck is secured to steel supports spaced maximum 5 ft. o.c. with 5/8" paddle welds with weld washers or with Teks 4 fasteners spaced 6" o.c. Side laps are secured with Teks 1 fasteners spaced maximum 30" o.c

System Type B(5): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ENRGY 3, Multi-Max FA-3, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**1, 2, 6, 7, 12**	**1:1.33**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic STA or Flintlastic APP Base T torch adhered.

Membrane:	Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, or Flintlastic GTA-FR CoolStar torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf. (For Fesco Board) (See General Limitation #7) -67.5 psf. (For High Density Wood Fiberboard) (See General Limitation #7)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck is secured to steel supports spaced maximum 5 ft. o.c. with 5/8" paddle welds with weld washers or with Teks 4 fasteners spaced 6" o.c. Side laps are secured with Teks 1 fasteners spaced maximum 30" o.c.

System Type B(6): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ENRGY 3, Multi-Max FA-3, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**1, 2, 6, 7, 12**	**1:1.33**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic Ultra Poly SMS Base Sheet torch applied.

Membrane:	One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar adhered to ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4
Maximum Design Pressure:	-52.5 psf. (For Fesco Board) (See General Limitation #7) -67.5 psf. (For High Density Wood Fiberboard) (See General Limitation #7)

Membrane Type:	APP Modified
Deck Type 2I:	Steel, Insulated
Deck Description:	22 ga., Type B, Grade 40 steel deck is secured at 6 ft. spans with Tek/5 fasteners spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 18" o.c.
System Type B(7):	Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**15 or 19**	**1:1.45**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Millennium One Step Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik Quik Set Insulation Adhesive, OlyBond 500 or OlyBond 500 Green in 3/4" – 1" wide beads spaced 12 inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.
Ply Sheet: (Optional)	One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.
Membrane:	One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, torch adhered.
Surfacing:	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-75 psf (See General Limitation #7.)

Membrane Type: SBS Modified

Deck Type 2I: Steel Decks, Insulated

Deck Description: 22 ga., Type WR, Grade 33 steel deck fastened 6" o.c. with Teks 5 fasteners to minimum ¼" thick structural steel support spaced maximum 6' o.c. Deck side laps are secured with Stitch Teks 1 fasteners spaced 24" o.c.

System Type B(8): Base layer of insulation mechanically fastened, optional thermal barrier loose laid.

All General and System Limitations apply.

Thermal Barrier: (Optional) Minimum ¼" thick DensDeck, SECUROCK Gypsum-Fiber Roof Board loose laid on deck.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**15, 16 with 18; 20, 21 with 22**	**1:1.45 ft²**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Base Sheet: One ply of Flintlastic Ultra Glass SA, self-adhered.

Membrane: Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic Premium GMS or Flintlastic Premium GMS CoolStar applied in hot asphalt full coverage at a rate of 20-25 lb/sq.
Or
Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar torch adhered to base sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -75 psf (See General Limitation #9.)

Membrane Type: SBS Modified

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. steel.

System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**
Approved Perlite Insulation Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Wood Fiberboard Minimum ½" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Approved Perlite Insulation Minimum ¾" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
DensDeck, DensDeck Prime Minimum ¼" thick	**1, 2, 6, 7, 12**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic STA or Flintlastic APP Base T torch adhered.
Membrane:	Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, or Flintlastic GTA-FR CoolStar torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. steel.

System Type C(2): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**
Approved Perlite Insulation Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Approved High Density Wood Fiberboard Minimum ½" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
Approved Perlite Insulation Minimum ¾" thick	**1, 2, 6, 7, 12**	**1:2 ft²**
DensDeck, DensDeck Prime Minimum ¼" thick	**1, 2, 6, 7, 12**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic Ultra Poly SMS Base Sheet torch applied.
Membrane:	One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar adhered to ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4
Maximum Design Pressure:	-52.5 psf. (See General Limitation #9)

Membrane Type:	APP Modified
Deck Type 2I:	Steel, Insulated
Deck Description:	22 ga., Type B, Grade 40 steel deck is secured at 6 ft. spans with Tek/5 fasteners spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 18" o.c.
System Type C(3):	All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**15 or 19**	**1:1.45**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA, self-adhered
Ply Sheet:	One or more plies of Flintlastic APP Base T or Flintlastic STA, torch adhered.
Membrane:	One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, torch adhered.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-75 psf (See General Limitation #7.)

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel, fastened 6" o.c. with puddle welds and washers to steel supports spaced maximum 6 ft. o.c. Side laps are secured with Teks 1 fasteners spaced maximum 30" o.c.

System Type C(4): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, ENRGY 3, Multi-Max FA-3, FlintBoard ISO, H-Shield Minimum 1.5" thick	**2, 5, 9**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered.

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic STA or Flintlastic APP Base T torch adhered.

Membrane: One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, or Flintlastic GTA-FR CoolStar torch adhered to base or ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -82.5 psf (See General Limitation #7)

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel, fastened 6" o.c. with puddle welds and washers to steel supports spaced maximum 6 ft. o.c. Side laps are secured with Teks 1 fasteners spaced maximum 30" o.c.

System Type C(5): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, ENRGY 3, Multi-Max FA-3, FlintBoard ISO, H-Shield Minimum 1.5" thick	**2, 5, 9**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered.

Ply Sheet: (Optional) One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic Ultra Poly SMS Base Sheet torch applied.

Membrane: One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30CoolStar adhered to ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -52.5 psf; with asphalt-applied cap membranes (See General Limitation #7)
-82.5 psf; with torch-applied cap membranes (See General Limitation #7)

Membrane Type:	APP Modified
Deck Type 2I:	Steel, Insulated
Deck Description:	22 ga., Type B, Grade 40 steel deck is secured at 6 ft. spans with Tek/5 fasteners spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 18" o.c.
System Type C(6):	All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**15 with 13 or 19 with 21**	**1:1.45**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.
Ply Sheet: (Optional)	One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.
Membrane:	One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, torch adhered.
Surfacing:	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-60 psf (See General Limitation #7.)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., ASTM A1008 SS Grade 33 steel deck fastened to min. ¼" thick steel structural supports spaced a maximum 6 ft. o.c. with Traxx/5 screws and ¾" diameter washers spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 12 in. o.c.

System Type C(7): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, FlintBoard$_H$ ISO, ACFoam-II, FlintBoard ISO Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck Prime		
Minimum ½" thick	**12 with 13, 20 with 21**	**1:1.33 ft²**
Minimum ½" thick	**12 with 13, 20 with 21**	**1:1 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq.

Ply Sheet: One ply of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq.

Membrane: One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq.

Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-112.5 psf (fastener density of 1:1.33 ft^2) (See General Limitation #7) -157.5 psf (fastener density of 1:1 ft^2) (See General Limitation #7)

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type F, Grade 40 steel deck is secured at 6 ft. spans with Tek/5 fasteners and ¾" washers per fixing point spaced 6" o.c. Side laps are secured with Tek/1 fasteners at 12" o.c.

System Type C(8): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FlintBoard ISO, ACFoam-II, H-Shield, FlintBoard$_H$ ISO Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**15 with 13 or 19 with 21**	**1:1**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.

Ply Sheet: (Optional) One ply of Flintlastic STA or Flintlastic APP Base T, torch adhered.

Membrane: One ply of Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR or Flintlastic GTA-FR CoolStar, torch adhered.

Surfacing: Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -60 psf (See General Limitation #7.)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., ASTM A1008 SS Grade 33 steel deck fastened to min. ¼" thick steel structural supports spaced a maximum 6 ft. o.c. with Traxx/5 screws and ¾" diameter washers spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 12 in. o.c.

System Type C(9): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, FlintBoard$_H$ ISO, ACFoam-II, FlintBoard ISO		
Minimum 1.5" thick	**N/A**	**N/A**
Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.		

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**12 with 13, 20 with 21**	**1:1.33 ft²**
Minimum ½" thick	**12 with 13, 20 with 21**	**1:1 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Two or three plies of Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet, Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the insulated substrate with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq. or Flintlastic Ultra Poly SMS Base Sheet torch applied.

Ply Sheet: One ply of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq.

Membrane: One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30 or Flintlastic FR Cap 30 CoolStar adhered with approved mopping asphalt applied at a rate of 20 to 25 lbs./sq.

Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-157.5 psf (fastener density of 1:1.33 ft^2) (See General Limitation #7) -172.5 psf (fastener density of 1:1 ft^2) (See General Limitation #7)

Membrane Type: APP Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. (*See Fastening Options Below*) steel deck fastened to structural supports spaced a maximum 5 ft. o.c. with Traxx/5 screws spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 20 in. o.c.

System Type D(1): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, Multi Max FA-3, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO or Any approved Polyisocyanurate Listed in Table 2 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**
Approved Perlite Insulation Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Base Sheet: One ply of Flexiglas Base Sheet, Glasbase Base Sheet*, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet Base Sheet, Yosemite Venting Base Sheet, or Flintlastic APP Base T** mechanically attached as detailed in Fastening #1 below or one ply of Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet Base Sheet mechanically attached as detailed in Fastening #2 below.
** Not with use SFS Dekfast fastening components*
*** With use of SFS Dekfast fastening components*

Fastening #1:	OMG #14 Roofgrip Fasteners and OMG 3” Round Metal Plates, Dekfast #14 with Dekfast Galvalume Steel Hex Plates, OMG #14 Roofgrip with 3 in. Ribbed Galvalume Plates or Flat Bottom Plates, or Trufast #14 HD Fastener with Trufast 3” Metal Insulation Plates, or FlintFast #14 with FlintFast 3” Insulation Plates at a 4" side lap 6" o.c. and two rows staggered in the center of the sheet, 6” o.c. **Minimum Grade 33 steel deck.** ***(Maximum Design Pressure -67.5 psf. ; See General Limitation #7***
Fastening #2:	OMG #14 Roofgrip Fasteners and OMG 3” Round Metal Plates, Dekfast #14 with Dekfast Galvalume Steel Hex Plates, OMG #14 Roofgrip with 3 in. Ribbed Galvalume Plates or Trufast #14 HD Fastener with Trufast 3” Metal Insulation Plates, or FlintFast #14 with FlintFast 3” Insulation Plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 12” o.c. **Minimum Grade 80 steel deck.** ***(Maximum Design Pressure -120 psf. ; See General Limitation #7)***
Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic STA or Flintlastic APP Base T torch adhered.
Membrane:	Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, or Flintlastic GTA-FR CoolStar torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	See Fastening Above

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. (*See Fastening Options Below*) Type B steel deck fastened to structural supports spaced a maximum 5 ft. o.c. with Traxx/5 screws spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 20 in. o.c.

System Type D(2): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, Multi Max FA-3, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO or Any approved Polyisocyanurate Listed in Table 2 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Approved High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**
Approved Perlite Insulation Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Base Sheet: One ply of Flexiglas Base Sheet, Glasbase Base Sheet*, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or Yosemite Venting Base Sheet mechanically attached as detailed in Fastening #1 below or one ply of Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet Base Sheet mechanically attached as detailed in Fastening #2 below.
* Not with use SFS Dekfast fastening components

Fastening #1: OMG #14 Roofgrip Fasteners and OMG 3"Round Metal Plates, Dekfast 14 with Dekfast Galvalume Steel Hex Plates, OMG #14 Roofgrip with 3 in. Ribbed Galvalume Plates or AccuTrac Flat Bottom Plates, or Trufast #14 HD Fastener with Trufast 3" Metal Insulation Plates, or FlintFast #14 with FlintFast 3" Insulation Plates at a 4" side lap 6" o.c. and two rows staggered in the center of the sheet, 6" o.c. **Minimum Grade 33 steel deck.** ***(Maximum Design Pressure -67.5 psf. ; See General Limitation #7)***

Fastening #2:	OMG #14 Roofgrip Fasteners and OMG 3” Round Metal Plates, Dekfast #14 with Dekfast Galvalume Steel Hex Plates, OMG #14 Roofgrip with 3 in. Ribbed Galvalume Plates or Trufast #14 HD Fastener with Trufast 3” Metal Insulation Plates, or FlintFast #14 with FlintFast 3” Insulation Plates at a 4" side lap 12" o.c. and two rows staggered in the center of the sheet, 12” o.c. **Minimum Grade 80 steel deck.** ***(Maximum Design Pressure -120 psf. ; See General Limitation #7)***
Ply Sheet: (Optional)	One ply of All Weather/Empire Base Sheet, Glasbase Base Sheet, Flexiglas Base Sheet, Flintlastic Base 20, Flintlastic Poly SMS Base Sheet, Flintlastic Ultra Poly SMS Base Sheet or one or more plies of Flintglas Ply Sheet Type IV or Flintglas Premium Ply Sheet Type VI adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of Black Diamond Base Sheet or Flintlastic Ultra Glass SA self-adhered or Flintlastic Ultra Poly SMS Base Sheet torch applied.
Membrane:	One ply of Flintlastic GMS, Flintlastic GMS CoolStar, Flintlastic Premium GMS, Flintlastic Premium GMS CoolStar, Flintlastic FR Dual Cap, Flintlastic FR-P, Flintlastic FR-P CoolStar, Flintlastic Premium FR-P, Flintlastic Premium FR-P CoolStar, Flintlastic FR Cap 30, Flintlastic FR Cap 30 CoolStar adhered to ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq. or Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	See Fastening Above

Membrane Type: APP/SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel, fastened to structural supports spaced a maximum 5 ft. o.c. with Traxx/5 screws spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 20 in. o.c.

System Type D(3): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ENRGY 3, Multi Max FA-3, FlintBoard ISO, H-Shield, FlintBoard$_H$ ISO or Any approved Polyisocyanurate Listed in Table 2 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Base Sheet: One ply of Flintlastic Ultra Poly SMS Base Sheet Base Sheet mechanically attached as detailed in Fastening below. Lap shall be heat welded.

Fastening: Trufast #15 EHD Fastener with Trufast 2.4" Barbed Metal Seam Plates space 12" o.c. in a 4" side lap. The lap is heat welded closed encapsulating the fastener row.

Membrane: Flintlastic GTA, Flintlastic GTA CoolStar, Flintlastic GTA-FR, Flintlastic GTA-FR CoolStar, Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar torch adhered to base sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: SBS Modified

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel, fastened to steel supports spaced maximum 5 ft. o.c. with Traxx/5 screws spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 20 in. o.c.

System Type D(4): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Any approved Polyisocyanurate Listed in Table 2, Approved EPS, Approved High Density Wood Fiberboard, Approved Perlite, DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Any thickness	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Base Sheet: One ply of Flintlastic Poly SMS Base Sheet or Flintlastic Ultra Poly SMS Base Sheet Base Sheet mechanically attached as detailed in Fastening below.

Fastening: OMG #14 Roofgrip Fasteners and OMG 3"Round Metal Plates, Dekfast 14 with Dekfast Galvalume Steel Hex Plates, OMG #14 Roofgrip with 3 in. Ribbed Galvalume Plates or Trufast #14 HD Fastener with Trufast 3" Metal Insulation Plates, or FlintFast #14 with FlintFast 3" Insulation Plates fastened 12-inch o.c. in the 4-inch wide lap and 12-inch o.c. in two equally spaced staggered rows in the field.

Ply Sheet: (Optional) One ply of Flintlastic Base 20 T or Flintlastic Ultra Poly SMS Base Sheet, torch adhered to base sheet.

Membrane: Flintlastic FR Cap 30 T or Flintlastic FR Cap 30 T CoolStar, torch adhered to base or ply sheet.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE